REMARKS/ARGUMENTS

This is a reply to the Office Action dated June 29, 2007.

Status of Claims

Claims 5, 6, 8, 13, 16, 17, 18, 19, 20, and 21 are currently pending in this application. Claims 1, 2, 3, 4, 7, 9, 10, 11, 12, 14, and 15 have been canceled. New claims 16-21 are currently added. Claims 5, 6, 8, and 13 are currently amended.

Amendments Discussion

Claim 5 has been amended to clarify in the preamble an antecedent for the imaged *film laminate* recited in the last line of the claim (e.g., page 8, lines 1, 9); the provided support layer comprises *a porous web having a fibrous or filamentary network* (e.g., original claim 11; page 4, lines 12-14; and page 7, lines 23-25); the provided foraminous surface comprises *a three-dimensional image transfer device* (e.g., page 3, lines 23-24); the provided retention means is a *vacuum* retention means (e.g., original claim 9); the *vacuum* retention means pulls *a vacuum on* the support layer and the molten polymer (page 4, lines 6, 17-18; page 10, lines 11-12) through a plurality of foramina *within said three-dimensional image transfer device* (original claim 8); and *the molten polymer extruded onto the support layer is integrated into the fibrous or filamentary network of the support layer (e.g., page 4, lines 15-18; page 7, lines 27-29).* Claim 6 has been revised to omit "films," and clarify the options of a nonwoven *web*, a woven *fabric*, and a combination thereof (e.g., page 5, lines 1-5; page 7, lines 24-25; page 9, lines 4-5, 9-10, 21-24), and the preamble has been clarified to be consistent with the change made in the parent claim preamble. Claim 8 has been amended to clarify in the preamble an antecedent basis for the *laminate* recited in the last line of the claim; to include several of the above-noted recitations added to claim 1; to incorporate the recitations of its original dependent claim 10 (except for the "film" option) and those recited in previously added claim 14; to further recite providing *an imaging patterning drum* comprising the three-dimensional image transfer device (e.g., page 7, lines 11-12), and to clarify that the molten polymer is extruded as *continuous* filamentary material (e.g., page 10, lines 9-10). The dependency of claim 13 has been revised to claim 5 in view of the incorporation of the recitations of the intervening claim 11 into the shared parent claim 5, and the preamble clarifies the recitation of a method of making a film laminate consistent with the parent claim. New claims 16 and 19 further recite that the support layer

comprises *a spunbond layer* (e.g., page 8, line 29). New claims 17 and 20 further recite that the spunbond layer comprises continuous filaments selected from the group consisting of *polyolefins, polyamides, polyesters, and halopolymers* (e.g., page 8, line 29 to page 9, line 1). New claims 18 and 21 further recite that the molten polymer comprises an *olefinic thermoplastic polymer* (e.g., page 3, lines 28-29). No new matter has been introduced. Newly added claims 16-21 are also readable on the elected invention/species identified at pages 2-3 of the most recent Office Action.

Interview Summary

The applicants acknowledge with appreciation the courtesy of the telephonic interview granted by the Examiner to the applicants' undersigned representative on September 11, 2007. No agreement was reached at that time as to the allowability of any particular claim. It was discussed that the elected method claims currently under examination are directed to a method of making an imaged film laminate, and not just an imaged film. As discussed with the examiner in this respect, molten polymer is integrated into the fibrous or filamentary network of the support layer during the method. Also, there was some discussion about the effect of the vacuum pulled on the support layer and molten film in the method of the present invention. The applicants' representative indicated that the applicants would confirm that the vacuum draws or pulls the molten film into the support layer while carried on the image transfer device to form imaged laminate, and clarify the claim language if appropriate in this respect. The applicants' representative indicated that the Mullane reference only processes molten plastic (no support layer), and that the secondary reference to Brock teaches that the continuous filament layer 16a is a preformed web in which the spun filaments have solidified and are not tacky when combined with mat 58 or mat 12a as Brock specifies an "unbonded" two-ply laminate 38 is formed 38 at the nip of rolls 34/36. There also was some discussion of what happens at embossing rolls 42, 44 shown in Fig. 2 of Brock (Figs. 2-3), and whether Fig. 3 of Brock shows a two-ply construction having interfacial bonding or molten film impregnation at embossed region 20. Lastly, the examiner referred to Fig. 15 of Mullane and discussed the possible obviousness of sticking a support layer under the extruded plastic film. The applicants' representative indicated that Mullane does not teach that modification and Brock uses preformed webs and does not extrude molten films onto webs.

Election/Restrictions

At pages 2-3 of the Office Action, claims 7 and 12, as amended in the applicants' previous response of March 28, 2007, were found to be directed to a species that is independent or distinct from the species originally claimed. According to the Office Action, original claim 5 required extrusion onto a support layer, with the support layer between the extrudate and the foraminous surface, and claims 7 and 12, which were generic to whether the support layer was required, now requires no support layer given the extrusion directly onto the three-dimensional transfer device. Therefore, the species of claims 7 and 12 of no support layer was found to be distinct from requirement of claim 5 of a support layer. The Office Action indicated that applicant has received an action on the merits for the originally presented invention, and this invention has been constructively elected by original presentation for prosecution on the merits and claims 7 and 12 have been withdrawn from consideration as being directed to a non-elected invention.

The applicants do not traverse the election of species requirement made in the most recent Office Action. Claims 5, 6, 8-11 and 13-15 were examined in the most recent Office Action as being readable on the originally presented invention. As indicated above, newly added claims 16-21 are also readable on the originally elected invention/species identified at pages 2-3 of the most recent Office Action.

Obviousness Rejection

Claims 5, 6, 8-11, and 13-15 have been rejected under U.S.C. §103(a) as being unpatentable over Mullane, Jr. (U.S. Pat. No. 4,878,825) in view of Brock et al. (U.S. Pat. No. 4,041,203).

With respect to claim 5, the Office Action indicates that Mullane teaches forming a three-dimensional web 551 (three-dimensionally imaged film) comprising the steps of providing a web of plastic material 550 (a molten polymer) onto a flexible foraminous forming member 995 (a foraminous surface) and using a vacuum chamber 962 to apply a fluid pressure differential to cause the heated web of plastic material to conform to the three dimensional pattern present in the flexible forming structure 935 (a retention means pulls the molten polymer through a plurality of foramina resulting in an imaged film laminate)(citing col. 18, line 53 through col. 19, lines 10 and Fig. 15). The Office Action acknowledges that Mullane does not expressly teach extruding onto a support layer between the foraminous surface and the extrudate. The Office

Action refers to Brock as teaching positioning a microfiber mat 58 (support layer) between an extruded web 16a and a roll with raised points 44 (foraminous surface) (citing col. 4, lines 9-22; col. 6, lines 10-28; and Figs. 2 and 4). According to the Office Action, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine Brock's microfiber mat as a support layer in the method of Mullane in order to provide the benefits of an outer microfiber layer, principally increased desirable fabric-like characteristics (citing Brock, col. 1, lines 9-13 and col. 6, lines 10-28). As to claim 6, the Office Action indicates that the microfiber mat 58 of Brock would necessarily be a fibrous or filamentary non-woven or woven (citing col. 6, lines 10-28). As to claim 11, the Office Action indicates that the microfiber mat 58 contains pores before it melts to the web 16a, which would make the support layer porous (citing col. 5, lines 35-64), and moreover, optimizing for less material in the finished product would include a point where the microfiber mat would not be sufficiently thick to not be porous (citing col. 3, lines 39-53). As to claim 13, the Office Action indicates that Mullane teaches that apparatus 640 uses a vacuum cylinder 655 to apply the vacuum (citing Fig. 10; col. 13, line 32 through col. 14, line 2). As to claim 8, the Office Action indicates that Mullane in view of Brock teaches the method of making a three-dimensionally imaged fabric as previously described with respect to claim 5. The Office Action acknowledges that Mullane does not expressly teach that the molten polymer should be applied as filaments. The Office Action indicates that Brock teaches that the extruded method 16a should be continuous filaments 18a (citing col. 3, lines 58-67). According to the Office Action, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Brock's use of continuous filaments to form the extruded web in the process of forming a three-dimensionally imaged fabric in the process of Mullane in order to further provide the benefits of an outer microfiber layer, principally increased desirable fabric-like characteristics (citing Brock, col. 1, lines 9-13 and col. 6, lines 10-28. As to claim 9, the Office Action refers to Mullane as teaching to apply fluid pressure via a vacuum chamber 962 (vacuum). As to claims 10, 14 and 15, the Office Action makes reference to the same passages of Brock or Mullane as made relative to claims 6, 13, and 11, respectively, as discussed above. This rejection is respectfully traversed.

In embodiments of the present invention, methods are provided for making a three-dimensionally imaged film laminate by extruding molten polymer or molten polymer continuous filamentary material onto a fibrous or filamentary support layer positioned on a foraminous

surface of a three-dimensional image transfer and using a vacuum to pull or draw the extruded molten polymer material into the fibrous or filamentary network of the support layer in forming a laminate such that the adhesion of the extruded molten polymer material to the support layer is greatly improved due to the integration of the extruded molten polymer material into the support layer (e.g., page 4, lines 11-19; page 7, lines 22-30).

As appreciated in the Office Action, Mullane only discloses extrusion of a web in the form of a substantially planar plastic film directly onto a foraminous forming member (e.g., col. 18, line 53 to col. 19, line 5, col. 19, lines 44-45), without provision for any intervening fibrous or filamentary support layer (cf., present claims 5, 8), nor the extrusion of the molten polymer in the form of continuous filamentary material (cf., present claim 8).

Referring to Mullane's discussions of Fig. 15 at col. 18, line 53 to col. 19, line 14 thereof, the Mullane reference nowhere teaches or suggests that the extruded plastic web 550 can still be conformed to the three-dimensional pattern present in the flexible forming structure 935, which is the objective of the Mullane reference, *if* a fibrous or filamentary support layer were hypothetically interposed between extruded web 550 and forming structure 935. That hypothetical scenario is not enabled by the teachings of the Mullane reference and any result of the hypothetical scenario would have been unpredictable, and, if anything, would more likely have been considered to run against the exclusive emphasis on direct extrusion techniques made by Mullane.

Brock does not compensate for the difference between Mullane and the present claims. Brock teaches that a continuous filament layer 16a is a *preformed* web in which the spun filaments have solidified and are not tacky when combined with *preformed* mat 12a or *preformed* mat 58 as Brock specifies that "after preparation" of the web 16a the preformed microfibermat 12a is brought into laminar contact with the web 16a at the nip of rolls 34, 36 to form the "**unbonded**" two-ply laminate 38 (col. 4, line 9-14). As shown by Fig. 2 of Brock, microfiber mat 58 is handled similarly as microfiber mat 12a as a preformed web that is rolled into contact with the opposite face of preformed layer 16a in forming unbonded laminate 38. Any discussion of what *may* happen at embossing rolls 42, 44 shown in Fig. 2 of Brock must take into account that present claims 5 and 8 recite "*extruding* said molten polymer *onto* support layer" or "*extruding* said molten polymer as continuous filamentary material directly *onto* said support layer" (Figs. 2-3). Brock indicates that discrete bond regions 20 are formed by the application of

heat and pressure in the preformed (i.e., non-molten) webs 12 and 16, but nowhere teaches molten polymer is extruded onto either layer (see col. 2, lines 1-16). Brock indicates that the heated roll can "soften" (not melt) fibers in mat 12a prior to the nip with embossing roll 44, such that microfibers in mat 12a tend to flow around the continuous filaments in web 16a "**on compression in the nip**" between rolls 42 and 44 (col. 5, lines 3-10). Therefore, Brock nowhere teaches or suggests "extruding" microfiber mat 58 or 12a onto continuous filament web 16a, nor teaches or suggests extruding microfiber mat 58 or 12a as a "molten polymer" or as a "molten polymer ... continuous filamentary material" onto continuous filament web 16a. It is apparent that Brock requires the use of pressure combined with heating to induce discrete regions of bonding between microfiber mat 58 or 12a and the continuous filament web 16a. Mullane, in contrast to Brock, is a non-pressure based operation where vacuum is used to induce direct contact between an extruded film against a patterning surface. The Examiner's suggestion that it would be obvious to include a fabric support in the process scheme of Fig. 15 of Mullane lacks support in Brock which, as explained above, does not provide for, nor enable any methods of, extruding molten film onto a fabric support layer with vacuum retention, much less as part of a three-dimensional imaging procedure performed in the making of a laminate. Mullane and Brock are different technical approaches used for achieving different solutions. Neither Mullane nor Brock teaches or suggests using a vacuum to pull or draw an extruded molten polymer material into a fibrous or filamentary network of a support layer in forming a laminate such that the adhesion of the extruded molten polymer material to the support layer is greatly improved due to the integration of the extruded molten polymer material into the support layer. The proposed combination of the Mullane and Brock references in the Office Action fails to meet all the presently claimed recitations, and, therefore, there is no *prima facie* case of obviousness established against the present claims by their combination proposed in the Office Action.

In view of at least the above, reconsideration and withdrawal of this rejection is requested.

It is believed that this application is in condition for allowance, and notice of such is respectfully requested.

If the Examiner believes that a teleconference would be useful in expediting the prosecution of this application, the official is kindly invited to contact Applicant's representative of record indicated below.

Respectfully submitted,

/Ramon R. Hoch/
Ramon R. Hoch, Reg. #34108

Date: September 24, 2007

Direct Correspondence To:
Customer Number 62753

Valerie Calloway, Esq.
Polymer Group, Inc.
9335 Harris Corners Parkway, Suite 300
Charlotte, North Carolina 28269
(704) 697-5177